WHIRRAKEE

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MONTHLY NEWSLETTER OF THE BENDIGO FIELD NATURALISTS CLUB

WHIRRAKEE VOL. 4, No.2 MARCH 1983

Monthly Newsletter of The Bendigo Field Naturalists Club.
Whirrakee takes its name from the Whirrakee Wattle (Acacia williamsonii) which is virtually endemic to the Bendigo region.

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COVER PHOTO

Inspecting an artificial hollow in the Whipstick in October, 1981.
Photo: John Lindner.

Deadline for next issue is Friday 18th March.
(Typed contributions are preferred, but if this is not possible, then please make every effort to use neat, legible hand writing or printing)

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- EDITORS PAGE -

First, a word of explanation. Because of the length of John Lindner's article on his artificial hollows in the Whipstick project, and the fact that it did not lend itself readily to serialisation, I decided to hold over Part 9 of the Orchids of Bendigo and District until the April issue, and publish John's article in full.

This raises a matter I would like member's views on. Quite a few of the articles in recent issues of Whirrakee have been quite lengthy, and would have been of greater value if accompanied by photographs. Whould The Bendigo Naturalist be revived to cater for this type of article? The Geelong Field Naturalists Club uses such a dual system, reserving The Geelong Naturalist for more detailed papers on natural history of their area, and using their newsletter for topical items and current notes and observations. The Committee will be reviewing publication policy again at its next meeting, and it would be useful to have member's views.

While on the subject of publications, the Eucalypts of the Bendigo District booklet is taking a little longer than originally anticipated to complete to printing stage, mainly because of revisions to the text by the authors (Don Franklin, John Lindner and John Robinson), and the usual problems of people involved in voluntary work finding time to carry it out. However, I can report that the manuscript is just about complete. I have been through it and made comments and queries of a minor nature which have been referred back to the authors before the manuscript is typed. The booklet should be printed by April or May. It will be an invaluable guide to the eucalypts of this district, not only in describing the species and their distribution, but in drawing attention to certain identification problems needing resolution, which hopefully will challenge others to fill in the gaps in current knowledge. It is to be hoped that it will be the first of many such publications to be produced by this club over the years ahead, documenting the natural history of the Bendigo area.

* * * * * * * * * * *

One of the few advantages of being laid low by a virus infection, which put me on the sick list for several days, was catching up on a bit of reading. My attention was caught by an article on the Macedon Ranges in the February issue of Habitat (available from the club library). It is ironic indeed that the Macedon Ranges should feature in this national magazine in the month that the ranges were devastated by fire. The article is headed "Protecting the Macedon Range", and was written by Tony Davis of Mount Macedon. There are some very beautiful colour photos accompanying the article, by Tony Davis and Barry Kemp, who have combined to produce a field guide to the flora of the region (apparently unpublished as yet). The article in Habitat is a useful summary of the various floral associations, but is more concerned with a plea for Government buy-back of sensitive areas, reduction of logging areas, extension of reservations to include all habitat associations, especially to the drier eastern end of the ranges, and a change to National Parks management for more sensitive areas such as the headwaters of Barringo Creek, where the Greater Glider was recently recorded for the first time.

The reaction to the human tragedy of the fires at Macedon, the Dandenongs, and Otway Ranges etc. has included singling out policies aimed at conserving natural vegetation as a major factor in the death and destruction. We can only hope that when things settle down that a sensible balance can be achieved between fire protection and conservation in all the fire devastated areas. Let us hope that the lovely blending of bush and exotic gardens for which Mt. Macedon was rightly famous will gradually be restored, and that the Macedon Ranges Conservation Society will eventually achieve their aim of having all the habitat associations included in extended reserves.

Eric Wilkinson, Editor.

ARTIFICIAL HOLLOWS IN THE WHIPSTICK

A PROGRESS REPORT

by John Lindner

In early September 1980, I fixed in place my first artificial hollow on a Grey Box tree in the south-western corner of the Kamarooka Forest. About a year later I had completed the placing of some 50 hollows in six different locations, (Sets 1-6) mainly in forested areas.

In February 1981, I came face to face with my first occupants: in one case, two Sugar Gliders, which merely wriggled deeper into their leafy nest, and in the other, an Owlet Nightjar which stared calmly back at me with its huge eyes from a mere 20 centimetres away.

That was the closest I had ever been to wild animals. I must say I was rather elated for quite some time after this: the hollows actually "worked"!

The inspiration for this project, and much of the method, came from Mr. Barry Golding of Kingston, who, in the course of undertaking a Master of Environmental Science thesis, erected a large number of such hollows in the Wombat Forest near Daylesford, a considerably wetter area than the Whipstick. He allowed me to borrow a copy of his thesis for a time, and also to view some of his hollows, one of which contained a large slowly squirming clump of Feathertail Gliders, the first I had ever seen. They were at a height above the ground which was quite unnerving at the time. Now I bound up a miserable five metres without a thought, and watch with some amusement as others gingerly scale the ladder. Barry also gave a talk to the Mammal Survey Group about his project.

WHAT IS AN ARTIFICIAL HOLLOW?

An artificial or man-made hollow is not in this case a box made of sawn timber, although such a construction will suit the purpose quite well. The hollows are made from actual hollow logs, scavenged from suitable fallen or lopped eucalypt branches, mainly from along road reserves. They are sawn into lengths averaging 30 to 40 centimetres, but some are a lot bigger and some considerably smaller.

The base and lid are roughly circular pieces of 6 mm thick tempered masonite, cut to fit over the ends. The base is nailed on securely, and the lid is hinged by means of a rectangular piece of durable rubber nailed to both sections. In two years, these materials have suffered little appreciable deterioration due to the elements. The lid is secured shut by means of a wire hasp and clip inserted through it. A circular opening is then cut in the side of the hollow near the top using a jigsaw, the average diameter being five to six centimetres. In some cases where a natural opening is already present in the side of the hollow, this is retained and used in preference to a cut hole.

Heavy gauge fencing wire is stapled around the hollow on one side, and the free ends are then stapled to the tree. Placing the hollows was a very arduous task in many cases, and required the use of a rope to haul the larger ones into position. In the case of attachment to Ironbark, the thick hard bark must be removed to enable the staple to bite into the trunk.

ARTIFICIAL HOLLOWS IN THE WHIPSTICK continued

With other eucalypts this is unnecessary. In general, the hollows are attached at a height a little under five metres, on the eastern side of the tree as far as possible, and with the opening also facing approximately eastwards. These latter two conditions are intended to place the hollow on the leeward side of the tree, to avoid entry of wind-driven rain and overheating by the sun during the afternoon in summer. The hollows are spaced at intervals of 50 to 100 metres, and the largest tree in the vicinity is selected at each site. They are numbered and measured before being placed.

PURPOSE OF THE PROJECT

I am a teacher with the Victorian Education Department. Part of my job involves running a field studies centre at Neilborough East, adjacent to the Whipstick woodlands and mallee. It goes by the rather grandiose title of "Whipstick Environment Centre", which seems to successfully mystify many people, but it is in fact simply a base, containing appropriate materials and resources, from which people may study the Whipstick area.

Of course one of the main facets of interest is the natural history of the Whipstick. When it comes to animals, although you can quite often get quite close to a Black Wallaby and occasionally see an Eastern Grey Kangaroo, it is very much more difficult to successfully view the small, fast-moving, largely silent, nocturnal and arboreal mammals, even if you go spotlighting. You cannot call one up on command. Putting up artificial hollows seemed a good way to attract animals to situations where they could easily be viewed during the daytime, when they are fairly sleepy and confined to the one spot. Children are naturally attracted to animals, and the project was aimed at enabling them to see them in their "natural" surroundings, rather than starting a menagerie.

Well, it hasn't quite worked out that way. Wild animals in "captive" situations in hollows are more often than not quite unco-operative, and can go to amazing lengths to conceal themselves in their nests: the mere hint of an animal conveys little to someone who has never seen one or who knows nothing about it. There is a world of a difference between these and a tame native animal which can be cuddled and petted: the Zoo Education Service for example has a large supply of them. Also it is very time-consuming for 20 or 30 people to each climb a ladder and have their look, and probably more stressful for the animals.

Another matter of time was the lack of it during working hours. Nearly all of the project has had to be undertaken in my own time, which in a way is more satisfying. In fact it has become a sort of research project, and only a few hollows are ever inspected by visitors.

INSPECTION ROUTINE

The hollows have each been inspected from five to ten times, depending on their accessibility and interest. For example, set 2 has been a little neglected because it is rather time-consuming to inspect, being strung out along a narrow track over a kilometre. All the other groups are arranged in circles. Also, if there is something interesting happening, you tend to go back more often. The hollows have not been inspected nearly often enough, not even once a month on average.

You can inspect all 50 hollows in one day with determination and a little help.

ARTIFICIAL HOLLOWS IN THE WHIPSTICK continued

MAMMALS FOUND IN THE HOLLOWS

Arboreal mammals are the most frequent users of the hollows, since they require shelter during the daytime. Nearly all the hollows have been at one time or another visited by mammals, as evidenced by the construction of leaf nests, or the deposition of scats. However, occupation of hollows is for varying periods of time, and, for reasons not fully understood by me, the mammals tend to move around quite a lot.

Sugar Glider (Petaurus breviceps)

Sugar Gliders readily took up residence in the hollows. 25 of the hollows have had constructed in them at some time or another the nests of green eucalypt leaves made by this small mammal. A large one of these is quite a work of craftsmanship, with each leaf being carefully placed. They apparently carry bunches of leaves in their tightly curled tails, but I have never seen this. Hundreds of leaves are built up in a circular pattern, and packed quite firmly. Of course the walls of the hollow keep the structure together. In the centre a spherical space remains with room for anything from one to ten, the largest number I have had. It is often impossible to tell exactly how many, since they all curl up tightly together. When the animals are asleep, they often pull the top leaves over the opening in the nest, and a little poking with a stick is necessary to view the interior.

Sugar Gliders use the hollows as diurnal refuges, and also for breeding. On several occasions, well-furred young animals have been found with adults, the numbers of juveniles ranging from one to five. However, with this larger number, two adult females were found with the group. The birth date occurs about June and July. Sugar Gliders do not leave any droppings inside the hollows, but a well-used hollow has a very strong smell.

The animals appear to be reasonably tolerant of human disturbance. In most cases they merely utter their bubbling growl and wriggle deeper into the nest. At other times they have proved very flighty and rapidly evacuate the hollow even as the ladder is being laid against the tree. They run to the topmost branches, and will remain there for long periods, often being molested by woodswallows or honeyeaters. It has occurred to me more than once that they are in danger from birds of prey in this situation. Sometimes they have dashed out and up, and glided away in broad daylight, even making several glides successively. It is a breathtaking sight to see such a small animal manoeuvre with great accuracy and speed amongst the timber. On one occasion an animal was seen to glide back to one of the hollows. The downwards glide always ends with a brief upward pull before landing. Despite this evacuation strategy, the animals always seem to return to the hollows.

Tuan or Brush-tail Phascogale (Phascogale tapoatafa)

It was some time before Tuans were found in any of the hollows, an average of about six months after hollow placement. In each of three hollows they took over an existing leaf nest but added their own distinctive materials, in two cases these being feathers and shredded bark. In the third case, the animal tightly packed quite a large hollow with sheep's wool from a carcase well over 50 metres away. This female Tuan had several naked blind young in mid-September 1982, and these were all well-furred by the end of the month.

ARTIFICIAL HOLLOWS IN THE WHIPSTICK continued

It would have been impossible to count the young without pulling the whole thing to pieces, and this was not done. Tuans may have from three to eight young, with numbers towards the larger end of the scale being more usual. However no more than eight will survive as there are only that number of nipples in the female's pouch area. Tuans give birth at around about very late July to early August. By that time all the males in the breeding population will have died off after the mating period. The fully grown young in the hollow I had under observation had all left it by mid-December.

Tuans deposit heaps of large, dry hard, black scats in hollows being used continually, and undigested remains of prey items, especially the exoskeletons of insects, can be seen in these scats. Tuans may resent human interference more than Sugar Gliders, but in the case of the female with young, she has stayed put and not deserted. If an animal does evacuate, it seems to disappear into thin air, so rapidly and expertly can it climb, always keeping the tree between itself and the observer.

Yellow-footed Antechinus (Antechinus flavipes)

This species of Antechinus belongs to the same family (Dasyurids) as the Tuan, but it is very much smaller in size.

The animals build an untidy somewhat shapeless nest of dead eucalypt leaves, sometimes adding huge quantities to completely fill the space. Within this they will shape a small cavity. Scats are deposited within the nest, and are smaller and thinner than those of the Tuan, but similar in appearance. The animals appear to be found within the hollows mainly during the breeding season, which commences in July, and from then on until the young are independent in October and November. Like the Tuan, there is a complete post-mating male die-off.

If an Antechinus dashes out of a hollow, it usually heads down the tree, seldom upwards, and dives into a hole at the base of the very same tree, where the remains of the older decayed and often hollow stump may be found. Of course much of the woodland here is regrowth following timber harvesting. In fact, if you examine with a torch the hollow tree stumps through the Kamarooka Forest, especially large completely dead stumps or those bearing weaker regrowth, you can easily find Antechinus scats and the remains of prey items which have not been eaten (e.g. insect wing-covers). These stumps are important components of the habitat for the Antechinus.

I have always thought that a lot of my smaller hollows were rather useless, but have had to reconsider since these are precisely the ones in which Antechinus with young have been found. At the end of September 1982 I found three females with young, two lots still firmly attached to the teats and appearing like a bunch of pink jelly beans and about the same size, protruding awkwardly from between the mothers' rear legs; and one lot free of the teats but still very small, naked and blind. In mid-October 1981 I found two hollows with fully developed and semi-independent young.

Brush-tail Possum (Trichosurus vulpecula)

Brush-tail Possums are relatively infrequently found in the hollows, but their occurrence is not tied to any one time of year. They build no nests and leave no other evidence of their presence. I have not found any animals with young, but neither have I pulled out any to examine pouches of females.

ARTIFICIAL HOLLOWS IN THE WHIPSTICK continued

They are only found in the larger hollows with large openings, the smallest opening on such a hollow being about six centimetres in diameter. Several hollows which are often occupied have very large openings, about double this diameter.

Brush-tail Possums appear to be intolerant of human interference. They do not move or evacuate, but may wake up and stare at the observer. They are never found in the same hollow the next day however. Or could it be that they are always on the move throughout their home range?

Bats

Four of the hollows have been "specially designed" for roosting bats. This simply means that the entrance hole is nearly flush with the base, the bats being able to enter and crawl up inside to hang from the walls near the top. This design has proved successful in the Wombat Forest.

However, until recently no bats or their distinctive tiny, dark, hard droppings have ever been found in any of my hollows. Then in December 1982 a whole maternal colony of Lesser Long-eared Bats (Nyctophilus geoffroyi) turned up in a very narrow hollow whose entrance hole was two-thirds of the way up from the bottom. The group comprised thirteen adult lactating females, and juveniles of both sexes to make a total of 36. Whether birth took place in the hollow or in some other location, I do not know.

Birds

Results with birds have been more disappointing, as I was confidently expecting more nesting activity. This has not eventuated so far, although there are plenty of potential "customer" species.

Owlet Nightjar (Aegotheles cristatus)

Being nocturnal, these delicate and fluttery little birds roost in hollows during the day. They have been found in most of the areas. In the area with set 5, one bird made a neat leaf nest and laid a clutch of four white eggs in October 1981. During this time it could be "called up" by lightly scratching on the box with a long stick, whereupon it would gaze out, at the onlookers (magic by Harry Butler's alter ego!), but not actually vacate. Being reluctant to inspect the hollow too often for fear of causing desertion, I missed the young birds, and when I next did so, the hollow contained a swarm of bees! When these were finally removed in December, there was one addled egg and pieces of membrane in the bottom, so I assume that, taking into account the time factor, breeding was successful.

Flushed birds may sit around quite nearby for some time, but on one occasion the bird dived straight into another artificial hollow. Sometimes white wash may be found where a bird has been roosting.

Brown Treecreeper (Climacterus picumnus)

It was in one of the smallest and what I had previously decided most "useless" hollows, that I found at the end of September 1982 two fully feathered Brown Treecreeper chicks. They lay very still and quiet in the nest of finely woven brown material (grass?, hair?) when I looked in, but subsequently uttered penetrating peeps which could be heard at 25 metres distance. Both parents were observed to feed the young who somehow managed to climb up the 20 centimetres to the opening and stick their heads out.

ARTIFICIAL HOLLOWS IN THE WHIPSTICK continued

One adult went right in and emerged with a small white faecal sac which it deposited well away from the nest. The interesting thing about the hollow is that it is on a large Yellow Gum, which is not a tree upon which I have ever observed Brown Treecreepers feeding, but I suppose they do if the peeling bark affords a grip: this tree was particularly smooth.

Hollows at the Whipstick Environment Centre (Set 6)

Two of these hollows are actually freestanding piped logs placed in the ground and half-filled with sand. Three are mounted on trees.

The habitat comprises a small block of scattered large trees, surrounded on all sides by open farmland, and is about one kilometre from the Kamarooka Forest.

Eastern Rosellas have laid eggs in two seasons in the free-standing type, but have raised no young, in one case probably because of disturbance by some curious children at the critical moment of incubation.

Galahs have been seen inspecting the hollows on trees, but have gone no further.

Starlings have made nests, laid eggs and raised young in both types of hollows, but I have destroyed their efforts on all occasions.

SUCCESSION OF ANIMALS USING HOLLOWS

While it could not be said with any certainty that there is competition for hollow usage, there are many hollows in which there has been a succession of occupants. This is summarised below.

SET NO.	SUCCESSION IN SOME INDIVIDUAL HOLLOWS (B = breeding)	TIME PERIOD
1.	Brush-tail Possum: Owlet Nightjar:	1 night
	Sugar Glider: Tuan: Sugar Glider:	4 months
	Sugar Glider: Owlet Nightjar: Sugar Glider: Brush-tail Possum	12 months
2.	Owlet Nightjar: Brown Treecreeper (B)	15 months
	Sugar Glider: Antechinus (B)	17 months
	Sugar Glider: Antechinus	9 months
	Sugar Glider: Tuan	5 months
	Sugar Glider: Antechinus (B)	9 months
3.	Sugar Glider: Antechinus: Sugar Glider	3 months
	Sugar Glider: Owlet Nightjar	12 months
5.	Owlet Nightjar (B): Bees: Tuan (B)	9 months

Because of the large number of Sugar Glider nests, many of the occupants of the hollows have been found using them, but if this is for breeding, there are usually noticeable changes.

ARTIFICIAL HOLLOWS IN THE WHIPSTICK continued

OTHER OCCUPANTS OF HOLLOWS

1. Nests of mud-building wasps, especially the small type with a circular entrance having a flared rim.
2. Two bee swarms both occupied hollows 50 metres apart in 1981. These were successfully removed from one hollow by an apiarist, but one hive still remains.
3. Various ants, spiders, beetles etc. If I end up in hospital in the future, it will probably be because I take a plunge from the ladder upon opening the lid of a hollow and have a large huntsman spider drop onto my face. Arachnophobia is definitely a liability!

DESIRABLE CHARACTERISTICS OF HOLLOWS

The following are the variable features of artificial hollows, with notes on how they effect the hollow's usefulness to fauna:

Size
Shallow (less than 20 cm) hollows are less used than deep ones (up to 50 cm). Very narrow hollows limit the size of the occupant and also the amount of nest-building material.

Opening
An opening suitable to the size of the animal and not much bigger is desirable. Any bigger allows enty of potential predators. In general I am of the opinion that the opening size of 5-6 cm is too large. It is notable that Sugar Gliders hurriedly evacuate hollows with large openings, whereas they tend to stay put in hollows with small openings.

Thickness
A thicker hollow is better able to prevent entry of moisture during prolonged rain, and also acts as a more effective insulator in hot weather.

Orientation
Hollows facing the south-west or west are more likely to be dampened in wet weather, and heat up more in summer.

Height
I daresay the higher the hollow is the better. However, all my hollows are at an average height of 5 metres.

Only one hollow (in set 1) has been found to be occupied on every inspection over two years. The occupants have always been Sugar Gliders, except for a brief period when a Tuan took over. The Sugar Gliders then resumed occupancy and bred in 1982.
This hollow has the following features:

1. 43 cm. deep
2. 18 cm. diameter (internal)
3. 3.5 cm opening (natural)
4. Very thick walls
5. Opening faces 110° magnetic
6. 5 metres above ground
7. Placed on a very large, thick, double-trunked Grey Box tree.

ARTIFICIAL HOLLOWS IN THE WHIPSTICK continued

SOME VERY TENTATIVE CONCLUSIONS

I cannot draw any firm conclusions on the nature of hollow usage by mammals and birds in the Whipstick, since I do not have nearly enough data, and the project could not in any sense be said to have been designed scientifically.

The most heavily populated hollows seem to occur in areas where there are few or no natural hollows visible to the observer. Thus in the area where set 4 is located, there are quite a number of readily seen natural hollows, due largely to the presence of numerous large Grey Boxes. This set of hollows has had the least number of occupants, and also the least variety of species.

In the area with set 3, it is very difficult to find a natural hollow in the relatively young trees, although there must be some. This set of hollows has had a large number of occupants, and quite a variety of species.

In addition to the presence or lack of natural hollows, there is a marked difference between the habitats of these two areas. The area with set 4 has only two species of eucalypt (one of which is almost completely dominant) and few understorey species. The area with set 3 has three species of eucalypts all mixed together, and a great variety of understorey species. However, I would be very uncertain as to the effect of these differences.

I have largely described what I have observed. The project has been invaluable to me in gaining familiarity with and additional knowledge of certain fauna of the Whipstick. In this case, familiarity leads me to express the notion that it is a privilege and a delight to have such tenants . . . . and you never know what will turn up next.

ACKNOWLEDGEMENTS

I would like to thank the following members of the Club:
Rob Moors for help with construction of the hollows.
John Robinson, Graham Hill and Ian Fenselau for help with placing the hollows.

I would also like to thank Barry Golding (Kingston), and Richard Attwell (Education Department, Bendigo)

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3. Gliders of the Gum Trees David Fleay Melbourne Bread and Cheese Club, 1947 (General information on the habits of the Sugar Glider)

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ARTIFICIAL HOLLOWS IN THE WHIPSTICK continued

DETAILS OF ARTIFICIAL HOLLOWS

September 1980 to December 1982

SET No. LOCATION

1. South-west corner of the Kamarooka Forest, Neilborough East.
2. 0.5 km further east in forest than Set 1
3. North-east corner of the southern section of the Kamarooka Forest, just out of Huntly.
4. Western edge of the Kamarooka Forest on Camp Rd.
5. Upper section of Phillips Gully, in the mallee dominated part of the Whipstick, along Boundary Road between locations 1 and 3.
6. Whipstick Environment Centre, Neilborough East.

SET	NUMBER OF HOLLOWS	DATE OF PLACING	EUCALYPT ASSOCIATION AND UNDERSTORY (* = species on which hollows are placed)	SPECIES RECORDED B=breeding record.
1.	10	Sept. 1980.	Grey Box* (dominant) and Yellow Gum (scattered). Sparse to fairly thick understory Black-anther Flax-lily Drooping Cassinia (very common) Clustered Everlasting Golden Everlasting Broom Bitter-pea Matted Bush-pea Coarse Dodder-laurel Gold-dust wattle Grey Mulga, Golden Wattle "Mystery" Wattle (all wattles except the 5th are common) Sweet Quandong, Wedge-leaf Hop-bush,	Sugar Glider(B) Tuan. Antechinus flavipes. Brush-tail Possum. Owlet Nightjar.
2.	10	Feb. 1981	Grey Box * and Yellow Gum * present as in location 1. Understory also as in location 1.	Sugar Glider. Tuan. Antechinus flavipes (B) Owlet Nightjar Brown Tree-creeper (B)
3.	10	July 1981	Grey Box *, Yellow Gum * and Red Ironbark * (all present in approximately even proportions) Sparse to fairly thick understory. Black-anther Flax-lily, Drooping Cassinia, Clustered Everlasting, Golden Everlasting, Cypress Daisy-bush	Sugar Glider (B) Antechinus (B) Lesser Long-eared Bat (B?) Owlet Nightjar.

ARTIFICIAL HOLLOWS IN THE WHIPSTICK continued

SET	NUMBER OF HOLLOWS	DATE OF PLACING	EUCALYPT ASSOCIATION AND UNDERSTORY (*=species on which hollows are placed)	SPECIES RECORDED B=breeding record.
			Cranberry Heath, Ruddy Beard-heath, Gorse Bitter-pea, Twiggy Bush-pea, Sticky Goodenia, Golden Pennants, Gold-dust Wattle, Golden Wattle, Whirrakee Wattle, Broom Honey-myrtle, Cross-leaf Honey-myrtle, Alpine Grevillea, Cherry Ballart, Leafless Currant-bush,	
4.	10	July 1981	Grey Box * (dominant) and Yellow Gum * (scattered). Sparse understory . Drooping Cassinia (very common) Gold-dust Wattle, Grey Mulga, Golden Wattle, Mystery Wattle, Whirrakee Wattle, Sweet Quandong.	Sugar Glider. Brush-tail Possum.
5.	5	August 1981	Red Ironbark * (dominant in, and confined to, the gully). Dense stands of Blue and Bull Mallee bordering the gully. Medium dense to very thick understory Drooping Cassinia, Sticky Cassinia, Cranberry Heath, Gorse Bitter-pea, Matted Bush-pea, Twiggy Bush-pea, Clasping Goodenia, Golden Pennants, Gold-dust Wattle, Golden Wattle, Whirrakee Wattle, Broom Honey-myrtle, Cross-leaf Honey-myrtle.	Sugar Glider. Tuan (B). Owlet Nightjar(B) Bee swarms (2)
6.	5	Mid-1980 and mid-1981	Grey Box * and Yellow Gum * (equally common). Red Ironbark (one only). Sugar Gum planted in old school yard.	Eastern Rosella (B) Galah. Starling (B).

BENDIGO BIRD OBSERVERS GROUP BIRD OF THE NIGHT DISCUSSION OCTOBER 1982

Subject Grey-crowned Babbler - Pomatostomus temporalis

Numerous other popular names have been given to the bird e.g. Apostle-bird, Happy Jack etc.

CALL Loud, pleasant, chattering calls, often culminating in a repeated, penetrating "ya-hoo". It is claimed that the first part of the call is uttered by the parent female, and the latter part by the parent male bird. Calls are not restricted to the breeding season but continue throughout the year.

APPEARANCE Both sexes are alike, medium size, length approximately 250 mm of which the tail is 110 mm. They are noticeably larger than the White-browed Babbler. Plumage is generally brownish-grey, becoming darker towards the rump. Tail is black with broad white tip. The crown is grey, eyebrows are broad and white, throat white, merging into grey breast and rufous brown abdomen. The eyes are pale yellow. The wings are dark brown with a cinnamon patch. The bill is black, long, and curved downwards at the tip.

BREEDING The usual period for breeding in the Bendigo District is September, October, November. Several nests are built, one being used to incubate the eggs and brood the young, the others being used by the rest of the family to roost in at night. Nests are large, domed, with the entrance shaped like a spout sloping down away from the nest. They are built of sticks, and twigs, lined with long grass, bark fibres, rootlets, and feathers, fur or woo . The nests may be from five feet to about thirty feet, above the ground. Eggs may be buff to dark purple-brown in colour with thin scribbles of darker colour. Usually three eggs are laid, but occasionally, the number of eggs found indicates that more than one female is using the nest. Incubation takes about 20-21 days. Fledging period is unknown. The female parent incubates the eggs and broods the chicks. The whole group of other birds in the family helps to feed the female parent and the young.

HABITAT In the Bendigo District Grey crowned Babblers occur in open woodland both north and south of Bendigo. They are not common.

HABITS Grey-crowned Babblers live in family groups of from two or three up to about twelve birds. In the Bendigo District, groups have been observed recently of from three to eight birds. Parent birds become mated for the life of either one, and are, as a rule, the only breeding birds in the group, the rest helping only with feeding, and building the nests.
The family group stays together throughout the year, and live and feed together in close parties. At night they roost in one of the dormitory nests built for the purpose or previously for breeding. When not feeding, they are often seen chasing one another from branch to branch or from one tree to another, and are often pestered by noisy miners.

FOOD consists of insects, spiders, and small lizards. Their long bills are adapted for probing under bark and into other crevices, and probably obtain their food as much in trees and shrubs, as on the ground among the leaf and twig litter. Birds near orchards have been recorded as significant destroyers of the codlin moth and other pests.

BENDIGO BIRD OBSERVERS GROUP BIRD OF THE NIGHT DISCUSSION continued

GENERAL They are reputed to have a long life.
In comparison with White-browed Babblers, the Grey-crowned species spends more time feeding in trees and much less time on the ground.
It is apparent that the population of Grey-crowned Babblers has greatly diminished over the past 50 or more years. Indications are that the birds have been reduced almost to extinction in the Geelong district and other areas. White-browed Babblers are much more numerous generally.
White-browed Babblers usually nest lower to the ground, in a fork close to the centre of a bush or sapling, whereas the Grey-crowned species usually build higher in a horizontal fork in the outside foliage of trees. Generally a new nest is built each year for breeding, and the same territory is believed to be retained for a number of years.

compiled by Bill Flentje.

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The letter published below was written in response to a motion passed at the February General Meeting, which is reproduced here for the information of members who were not at that meeting.

"That this Club dissociates itself from the activities of any body engaged in party political campaigning."

17/2/1983

Mr. Eric Wilkinson,
President,
Bendigo Field Naturalists' Club.

Dear Eric,

It seems that, when an issue arises that calls for an unequivocal stand on the part of all caring people, the Bendigo F.N.C. can be relied upon to dither, prevaricate and otherwise avoid fronting up. I refer, of course, to the South-West Tasmania Dams issue, the latest of a string of non-decisions and inactions by the Club on conservation issues. If the Club thinks, as is implied by the no-politics motion of the last meeting, that serious conservation is, can be or should be a non-political matter, then we're burying our head in the sand.

South-West Tasmania may not be the only loser. The Club has acquired a reputation as an ineffectual organization more concerned with the social life of its members than with gutsy natural history and conservation matters. Many energetic young Bendigo people who could well be the mainstay of the Club in the future, have taken and will take their enthusiasm elsewhere.

One most disappointed member,

Donald Franklin.

BIRD NOTES AND OBSERVATIONS FOR FEBRUARY

A good turnout of members welcomed Mr Evan Thomas of Wakool, who showed slides of birds that frequent the rice growing area of southern N.S.W. His slides were of excellent quality and it was apparent that Mr Thomas through the lens of the camera has gleaned many interesting observations over the years. It was suggested after the meeting that a future campout be conducted at Mr Thomas' property. (with permission from Mr Thomas.)

During the meeting our members congratulated Mr and Mrs Ipsen on reaching their golden wedding anniversary, and also Mr and Mrs Ruedin , who have celebrated forty years of marital bliss.

Observations over the Christmas break were good considering the drought and the hot conditions. A lone Dollar Bird was sighted in Mallee scrub near Inglewood on the 19th January. This is the first sighting of this species close to Inglewood. Our member also reported that Flour Mill workers at Bridgewater had recorded thirteen Dollar birds on the 7th January but by the 11th only two were recorded. Another first for the Inglewood district was the recording of a Caspian Tern (25.1) that was seen resting on a mudspit at the Inglewood reservoir.

Kennington reservoir has yielded some interesting observations over the last two months. A Banded Landrail was observed feeding in shallow water on the edge of a cumbungi patch on the 12th of January. Other observers at Kennington have listed Pelicans, Yellow Billed Spoonbills, two Caspian Terns (7th Jan.) a Large Egret and Reedwarbler and on the 2nd January a Great Crested Grebe. Recordings from Bamawn were of a Little Falcon taking Starlings (30/12), a Peregrine Falcon (14/12) and a Singing Bushlark (10/12).

An interesting observation considering the dryness was a Mountain Thrush turning up at Lyal Glen in January, the dryness being the reason for the bird taking refuge in our member's garden up to this time (15/2). The bird was banded after stunning itself against the house window.

There has been a number of birds reported nesting and feeding young over the Christmas break. They are Brown-headed Honeyeaters, Wagtails, Rufous Whistlers, and Painted Honeyeaters. These are very late nesting reports and are surprising due to the state of the weather. At Lake Neangar on January 3rd three different Egrets were observed feeding together. They were the Little, Large and Intermediate. The Little Egret could be distinguished from the other two by its black bill and legs, and the Large Egret by its noticeably larger size. The observer commented that the drying of inland waters must be having a disturbing effect on water bird distribution.

Several birdos from Bendigo ventured to the Kerang Lakes (4.5/12/82) where they met Tom Lowe at Cullens Lake, who estimated the water bird population to be forty to fifty thousand. A great variety of birds were recorded, the highlights being Great Crested Grebe, White Breasted Sea-eagles, nesting Peregrine Falcon and Whistling Kites, Banded Stilts, two parties of White winged Wrens, and about twenty Black Honeyeaters feeding on the flowering Berrigan (Eremophila).

MAMMAL SURVEY GROUP REPORT

The February Mammal Survey Group meeting was held at Graham and Di Hill's home on the 17th. As many members were a little late attending owing to the watering restrictions, Di showed the few of us that did arrive on time, the garden, where the drought had taken its toll. With her usual enthusiasm and optimism, Di told of her gardening plans once the drought is over. It was agreed by various members that many of the trees that were lost had expired in the last fortnight.

As the night advanced and the Group got down to the more serious business of mammaling, it was decided to:

(i) have a trapping night on Saturday, the 19th February, at Gordon Malone's property, to attempt to capture the elusive white-striped bat and to spotlight Sminthopsis (marsupial mice);

(ii) have another bat trapping effort before the next meeting, at a date to be set by Bill Holsworth;

(iii) do a mammal survey of the Dalyenong Flora Reserve to complement the plant and bird survey already effected.

An area to keep in mind for a future mammal survey is at Chute, near Beaufort. The photocopying of the Wildlife Research Magazines Index is continuing.

In notes and observations it was reported that a group of six black-wallabies were seen together beside a bush track in the Marong Forest three days before Christmas. The next evening, in approximately the same position a mating pair was seen. The Group generally conceded that groups of wallabies was an unusual sight around Bendigo.

The usual genial conversation over supper concluded the meeting.

Next meeting to be held 8 pm on 17/3/83 at Bill Holsworth's home, 13 Nabilla Crescent.

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FULL COLOUR THREATENED SPECIES POSTERS

Two superb new colour posters showing the threatened Bush Thick-knee and the rare Red-flowered Greenhood orchid are now available. Published by the Conservation Council of Victoria, these posters measure 710mm x 500mm (28" x 19") and are printed on heavy, semi-gloss paper.

The Red-flowered Greenhood is found in Victoria only in three known localities in the Alps. It is one of the 16 vulnerable or endangered Victorian orchids.

The Bush Thick-knee's habitat is threatened by clearing of forest and woodland.

A set of two posters costs $4 (plus $1.50 postage), individually posters are $2.50 each ($1.00 postage). Write now or call at the Conservation Council of Victoria, 285 Little Lonsdale Street, Melbourne. Tel.663 1561.

EASTER CAMPOUT

Friday 1st to Monday 4th (Tuesday 5th) April

Otway Ranges

CAMPSITE On a creek, just out of Gellibrand. General store in the town. Caravans and campervans welcome.

ROUTE Proceed to Gellibrand via Castlemaine, Daylesford, Ballarat, Cressy and Colac. Total 253 Km.

Note: 1. In Ballarat, travelling in from Creswick, proceed straight across the main highway in the middle of town, and turn right into Skipton Street which becomes the Glenelg Highway. The turnoff to Colac is clearly signposted.

2. In Colac, go through the town and take the left turnoff marked "Beech Forest - Gellibrand".

DIRECTIONS TO CAMPSITE

At Gellibrand, turn right along the Carlisle River road (signposted). Proceed 1.8 kilometres, to where there is a brown brick house located down the hill on the left. At the gate just past this house, turn off the road to the left. This will be signposted "B.F.N.C.". From thereon, follow the signs.

NOTIFICATION

At the March Club meeting, a list will be compiled of those people who intend coming.
If anybody is going to Gellibrand on the Thursday evening, please get in touch with John Lindner for detailed instructions as to how to locate the actual camping site.

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GLENELG NATIONAL PARK CAMP May School Holidays

Sunday 8th to Saturday 21st May

CAMPSITE DETAILS

For this long camp, we will be occupying two different sites, the details of which follow:

1. First week, Sunday 8th to Saturday 14th: campsite on the Glenelg River, at the western end of the national park, not far from Nelson. The site we have provisionally booked is called Hutchessons, but as this is rather a small site, we may have to request a larger one on the river if more than 20 people come in this first week. Details for this site:
(a) Camping in tents only (b) Pit toilet (c) Tables (d) Fireplaces
(e) Drinking water to be obtained from sources nearby (f) Small charge for use of the site ($6.00 total, divided by the number of people).

If you want to bring a caravan or campervan during this first week, you only have one choice of site, which is the Princess Margaret Rose Caves area, about five kilometres downstream from Hutchessons. Details for this site:
(a) Toilets, showers, tables, fireplaces, water (b) Charges are $1.10 per adult per night and 60c per child per night.

Even though we will be split into two camping groups during this first week, this need not be a great obstacle.

GLENELG NATIONAL PARK CAMP continued

2. Second week, Sunday 15th to Saturday 21st: campsite on Little Moleside Ck, at the eastern end of the park. This site is being specially opened up on our behalf by the National Parks Service, and is near the Kentbruck Heath, quite a different area from the riverside. Details for this site:

(a) Camp in tents, or use caravans and campervans.
(b) The N.P.S. will slash the area and locate a fireplace.
(c) We will erect our own pit toilet.
(d) No other facilities on site.
(e) Water from the creek.
(f) Small charge for use of the site $15.00 total, divided by the number of people.

HOW TO GET THERE

Calder Highway to Castlemaine; Pyrenees Highway to Maryborough, Avoca, Ararat; then on through Willaura, Dunkeld, Hamilton, Grassdale and Digby to Dartmoor. Total 358 kilometres.
Since the campsites for the first week are both on the north side of the river, we may be able to go there direct from Dartmoor.
However, the N.P.S. may require us to enter the park through Nelson, and check people off as they come. This detail is yet to be finalised.

Distances: Direct from Dartmoor, 25 km approximately.
Via Nelson, 50 km approximately.

SUPPLIES Obtainable at Nelson or Dartmoor.

BOATING If you own or can borrow a canoe or other craft, this will be of great use on the river.

GEAR Bring clothing to suit all conditions (wet and dry, hot and cold)

ACTIVITIES Mammal-trapping, Bird watching, Plants,
Visit Discovery Bay Coastal Park and Mt. Richmond National Park, both very close by.

NOTIFICATION
You can come for all or part of the time.
It is imperative that you notify John Lindner of your intentions, even if they are only approximate. You can do this by ringing (46 7132) or at the April 13th Club meeting.

After that date, our bookings will be confirmed and paid for. It is especially vital to know how many people will be coming during the first week, so that we can obtain a bigger campsite if necessary.

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MAMMAL SURVEY GROUP
Next meeting Bill Holsworth's home 13 Nabilla Crescent, Strathfieldsaye.

Bat-trapping Either on Wednesday 16th or Thursday 17th March, it is hoped that we will be having a training session with Fisheries and Wildlife personnel, in order to gain a banding permit. In either case, meet beforehand at Bill Holsworth's, 13 Nabilla Crescent. Contact John Lindner (46 7132) closer to the time to confirm the actual date.

COMMITTEE NOTES

The February committee meeting was held at Win Demeo's home.

1. With the positive response by the City Council to our requests, we will proceed with our planned display for the Community Day.
2. Reminders were sent to financially outstanding members. The response so far to this has been quite encouraging.
3. "Eucalypts of Bendigo" is progressing smoothly.
4. A motion that "Eucalypts of Australia" be donated to the Sandhurst Collection along with a suitable letter was carried.
5. It was decided that we should sell the "Illustrated Handbook of Victoria". Bids are now being sought.
6. New members approved were: (i) Miss M.L.Ross
   (ii)Mrs H.Bass.
7. It was decided to look into the possibility of re-nominating Mr.Frank Robbins for the Australian Natural History Medallion Award.
8. Index for Vol. 1 of Whirrakee is to be printed.
9. The C.C.V. is to be asked to help pressure the government for a final resolution of the Whipstick.

PUBLICATIONS RECEIVED

1. The Bird Observer No's 612 & 613 Jan.Feb. 83.
2. Geelong Naturalist Vol.19.No.3 Nov.82.
3. Maryborough F.N.C.Newsletter Vol.31 No.2 Aug-Dec.82
4. A.C.F.Newsletter Vol.15 No.1 Feb.83
5. Habitat Vol.11 No.1 Feb.83
6. Ballarat F.N.C.Excursion-NewsSheet Feb.83.
7. Geelong F.N.C.Newsletter Feb.83.
8. N.P.P.S.Newsletter No.50.Jan.83.
9. Pulpwood Harvesting from State Forest in East Gippsland - Draft Assessment of Environmental Effects.

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CENTRAL VICTORIA ARCHAEOLOGICAL SOCIETY

The next speaker will be Dr.Paul Ossa talking on "Peruvian Pottery". Dr. Ossa has worked extensively on pottery in South America and in Central America. His talk will be a synthesis of a lot of his work in this field.

The next meeting is on Monday March 28th at 7.30 pm in the B.C.A.E. Students Union Meeting Room.

WESTERN VICTORIA FIELD NATURALISTS CLUBS ASSOCIATION

MAY CAMPOUT - MILDURA 14th-15th MAY 1983

Dear Members of the Bendigo F.N.C.

The Sunraysia Naturalists Research Trust extend a warm invitation to all Clubs and affiliated bodies of the Western Victoria Field Naturalists' Clubs' Association to attend a "Campout" in Mildura on the weekend of the 14th and 15th May, 1983.

Originally, a campout at Hattah was suggested, but members of the Sunraysia N.R.T. thought that, due to the exceptionally dry season, this would not be a good idea.

Formal activities of the weekend will be based at Mildura where there is a wide range of accommodation available, including caravan parks, hotels and motels. I am enclosing brochures supplied by the S.N.R.T. indicating some of these and it is suggested that early booking is important for all types of accommodation, as the May school holiday period is a peak tourist time in Mildura.

The S.N.R.T. wish to draw our attention to the brochure from the Apex Caravan Park, which is a large, well-serviced park in a bushland setting on the banks of the Murray about 4 km from the city centre. Onsite vans are available for a minimum period of one week during holiday periods, but other vans can be booked and brought into the park for shorter periods.
* They suggest that all campers use this park if possible and the management of Apex Park are prepared to set aside an area for our group.

However, firm bookings would need to be made by the end of March.

I like this suggestion and urge all Clubs to consider it. It seems from past Campouts, that there is a real "togetherness" engendered when we are accommodated in the one spot.

When program arrangements are finalized, these will be circulated to all Clubs, along with the agenda for the May meeting.

With best wishes for the New Year from Trevor and myself.

Yours sincerely,
Gwen Skinner.
Secretary W.F.N.C.A.

ADVANCE NOTICE - further details later:

The October Annual Meeting, to be hosted by the Ballarat F.N.C. will be held on 14th-16th October, 1983, at the "Lady Northcote Camp", Bacchus Marsh.

BENDIGO FIELD NATURALISTS CLUB

Address for correspondence, P.O. Box 396, Bendigo 3550.

Office bearers for 1982-1983

PRESIDENT	Eric Wilkinson	7 Weatherall St. Cal.Gully	46 8736
SENIOR VICE PRESIDENT	Rob Moors	Sedgwick	39 6254
JUNIOR VICE PRESIDENT	John Lindner	62 Simpsons Rd. E'hawk	46 7132
SECRETARY	Laurie Leeson	76 Lawson St.,Spring Gully	43 0521
ASSISTANT SECRETARY	Rod Fyffe	546 Hargraeves St. Bendigo	43 7673
TREASURER	Glenise Moors	Sedgwick	39 6254
MEMBERSHIP OFFICER	Win Demeo	Kamarooka	36 9226
EXCURSION ORGANISER	John Lindner	62 Simpsons Rd., E'hawk	46 7132
LIBRARIAN	Helen Boon	Kamarooka	36 9252
EDITOR	Eric Wilkinson	7 Weatherall St. Cal.Gully	46 8736

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Membership of The Bendigo Field Naturalists Club is open to all those interested in natural history. The membership subscription rates are Single $9.00, Family $13.00, Pensioner and children, $6.00
Whirrakee subscription only, $8.00

General Meetings are held on the second Wednesday of each month at the Conference Rooms, Department of Agriculture, Midland Highway, Epsom. Meetings Start at 7.30 pm, and conclude with supper.
The Annual Meeting is held in September.

Excursions The assembly point for excursions is outside the Special Services Complex in Havlin St. East, Bendigo, unless otherwise specified.
Full day excursions normally commence at 10.0 am., (usually on a Sunday) Half day excursions normally commence at 2.0 pm, and may be either a Saturday or Sunday. Day or half day excursions are usually held on the weekend following the General Meeting. Campouts held several times in a year, usually co-inciding with long weekends or holiday periods.

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The B.F.N.C. has two active sub-groups.

The BIRD OBSERVERS GROUP meets on the first Friday of the month at the Agriculture Department, Epsom, at 7.30 p.m.

President:	John Berry	22 Barrell St., Eaglehawk	46 9921
Secretary:	Harvey Rich,	58 Dundas Rd., Maryborough	61 1698

The MAMMAL SURVEY GROUP meets on the third Thursday of each month, (or fourth Thursday when third Thursday is day after general meeting) at 8.0 p.m. in member's homes as announced in the monthly diary.

President:	Berry Vardy,	Rocky Rises Rd., Maiden Gully,	49 6214
Secretary:	John Lindner,	62 Simpson's Rd., Eaglehawk	46 7132

MR &MRS R B ALLEN
20 HOUSTON ST.
BENDIGO
3550

- DIARY -

MEETINGS

March 9	Dr.Brian Coman of the Lands Department will speak on his research work on Foxes. We are grateful to Brian, who agreed at only a month's notice to fill in this unexpected gap in our syllabus, when the previously uninvited speaker was unable to come.
April 13	To be announced.
May 4	Franklin River, South-west Tasmania. Rob and Cynthia Watkins and John Lindner will show slides and talk of their trips down the Franklin River. It is hoped to also obtain movie film to show at this meeting.

EXCURSIONS

Sunday March 13	Mt.Franklin-Hepburn Springs - Wombat Hill Leader: Graham Hill NB Meet at Havlin St. at 9.00 am (Details on P.12 of Whirrakee Vol. 4, No.1)
Labour Day W/E March 12-14	V.F.N.C.A.Meeting at Macropus Park, Appin, near Kerang. Make your own booking on (054) 57 6222. Full board available at $20. per day. You can also camp, but please notify the park proprietor. The programme in outline is Saturday - Mystic Park; Sunday - Pyramid Hill, and Monday - Reedy Lake. Details available from Laurie Leeson.
Easter April 1-5	Campout on private property near Gellibrand in the Otway Ranges. Details on P.17.
May Holidays May 8-21	Long camp in Glenelg National Park. First week on Glenelg River near Nelson. Second week at Little Moleside Creek near Kentbruck Heath Full details on P.17-18.

MAMMAL SURVEY GROUP

Thurs.March 17	Meet at 7.30 pm at Bill Holsworth's home, 13 Nabilla Cr. Kennington. Fisheries and Wildlife officers will be present to conduct a training session in bat banding. (Bats will be trapped the night before for this session.)

BIRD OBSERVERS GROUP

Fri.April 8	(Note shift in date because of Easter) 7.30 pm, Dept. of Agriculture, Epsom. (No details supplied.)